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## Specification of C5



### Change History

Author	Revision	Changes	Date
Oliver Liu	R0.1	Initial Draft	2009-6-22

# Index

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	CONTACT INFORMATION.....	1
1.2	ABBREVIATIONS, ACRONYMS AND DEFINITIONS .....	1
<b>2</b>	<b>HARDWARE SPECIFICATION.....</b>	<b>1</b>
2.1	GENERAL SPECIFICATION .....	1
2.2	TEMPERATURE, HUMIDITY AND STATIC PROTECTION SPECIFICATION.....	1
2.3	RF SPECIFICATION .....	2
2.3.1	RF Transmitter.....	2
2.3.1.1	Transmitter Section Description.....	2
2.3.1.2	Transmitter Specification .....	2
2.3.2	RF Receiver .....	2
2.3.2.1	Receiver Section Description .....	2
2.3.2.2	Receiver Specification .....	2
<b>3</b>	<b>SOFTWARE SPECIFICATION .....</b>	<b>3</b>
3.1	CALL FEATURES .....	3
3.2	MESSAGING FEATURES .....	3
3.3	PHONEBOOK .....	3
3.4	SECURITY AND SETTINGS.....	3
3.5	FM RADIO (OPTIONAL) .....	3
3.6	PERSONALIZATION.....	3
3.7	ORGANIZER, GAMES, APPLICATIONS AND LANGUAGE.....	3
<b>4</b>	<b>SALES PACKAGE CONTENTS .....</b>	<b>3</b>

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## 1 Introduction

C5 is a mobile phone with CDMA 2000 1x 450MHz Block A/C/F. C5 provides a set of basic functions, such as voice call, SMS, MMS, data service, also C5 provide you powerful multi-media function.

### 1.1 Contact Information

Any questions regarding C5 mobile phone or this datasheet, please contact AsiaTelco Technologies Co.

Floor 3, #289-8 BiSheng Road

Zhangjiang High-Tech Park, Pudong, Shanghai

P.R China 201203

Tel: (8621)51688806

Fax: (8621)33932400

E-mail: sales@asiatelco.com

### 1.2 Abbreviations, Acronyms and Definitions

BS	-	Base Station
MCU	-	Microprocessor control unit
MMI	-	Man Machine Interface
MO	-	Mobile Originates
MSC	-	Message Service Center
MT	-	Mobile Terminated
UIM	-	User Identifier Module

## 2 Hardware Specification

### 2.1 General Specification

✓ Type	Bar type
✓ Mode	CDMA 2000 1x (backward compatible to IS-95 A/B)
✓ Band Frequency	450MHz Block A/C/F
✓ Data Service	Optional
✓ Speech Codec	QCELP, EVRC
✓ System Memory	64Mb Nor Flash + 32Mb pSRAM
✓ Antenna	Internal
✓ Dimensions	111mm*45mm*15mm (H*W*D)
✓ Color	Grey
✓ Display	1.8" 128*160 dots Or 1.5" 128*128 dots
✓ Connectors	USB 8 pin
✓ Battery	850mAh Li-Ion battery
✓ Talk Time (max.)	2.5 hours
✓ Standby Time (max.)	200 hours
✓ Charging Time (max.)	<4 hours
✓ Midi Ring Tone	32 Poly

### 2.2 Temperature, Humidity and Static Protection Specification

✓ Operating Temperature	-20 °C ~ 55 °C
✓ Storage Temperature	-40 °C ~ 85 °C
✓ Humidity	0 ~ 95 % Relative humidity (Non-condensing)
✓ Static Protection	Contact discharge 4kV, air discharge 8kV

## 2.3 RF Specification

### 2.3.1 RF Transmitter

#### 2.3.1.1 Transmitter Section Description

The transmitter up-converts the baseband CDMA signals to RF signal of 450M band. The transmitter section consists of the Zero-IF interface, the baseband filters, up-conversion mixer and pre-amplifier.

#### 2.3.1.2 Transmitter Specification

Transmitter performance test specification is CDMA 2000 mobile station minimum requirement standard 3GPP2 TSG C1011-A.

Operating Frequency	452.5MHz ~ 457.5MHz
RF Output Power	Maximum 0.2W (23dBm)
	Minimum 10nW (-50dBm)
Frequency Stability	+/- 300Hz
Open Loop Power Control output Power	RX= -25dBm TX = -57.5 ~ -38.5dBm
	RX= -65dBm TX = -17.5 ~ +1.5dBm
	RX= -93.5dBm TX = +10.5 ~ +29.5dBm
Spurious Emission	-42dBc/30kHz (885k< $\Delta$ f<1.98MHz)
	-54dBc/30kHz (1.98M< $\Delta$ f<4.0MHz)
	-13dBm/1MHz (4.0M< $\Delta$ f)

**Table 1 Transmitter specification**

### 2.3.2 RF Receiver

#### 2.3.2.1 Receiver Section Description

The receiver path converts the RF signal from CDMA 2000 cellular band (450MHz, band class 5) down to zero-IF signals. The receiver path is composed of RF to zero-IF down-conversion mixer, baseband filters, and baseband gain stage with DC offset correction and zero-IF baseband interface.

#### 2.3.2.2 Receiver Specification

Receiver performance test specification is CDMA 2000 mobile station minimum requirement standard 3GPP2 TSG C S0011-A.

Operating Frequency	462.5MHz ~ 467.5MHz (Cellular Band)
Receiver Sensitivity	-104dBm @FER 0.5%
Single Tone Desensitization (FC+/-900KHz @-30dBm)	-101dBm @ FER 1%
IMD (FC+/-900KHz, FC+/-1700KHz @-43dBm)	-101dBm @ FER 1%
(FC+/-900KHz, FC+/-1700KHz @-32dBm)	-90dBm @ FER 1%
(FC+/-900KHz, FC+/-1700KHz @-21dBm)	-79dBm @ FER 1%
Conducted Spurious Emission	RX band -76dBm @ 1MHz RBW
	TX band -61dBm @ 1MHz RBW
	Other Frequencies -47dBm @ 30KHz RBW

**Table 2 Receiver Specification**

## 3 Software Specification

### 3.1 Call Features

- ✓ Integrate hands-free speakerphone
- ✓ Automatic answer with the headset
- ✓ Any key answer
- ✓ Caller ID, call hold, call diver, call waiting
- ✓ Call timer
- ✓ Logging of dialed, received and missed calls
- ✓ Automatic redial
- ✓ Speed dialing
- ✓ Vibrating alert
- ✓ Call barring
- ✓ Conference calling with up to 3 participants

### 3.2 Messaging Features

- ✓ SMS, capacity 200
- ✓ Input methods: en, abc, ABC, 123
- ✓ Common inbox
- ✓ Cell broadcast
- ✓ Group message, up to 10 receiver
- ✓ Extract numbers
- ✓ Text templates
- ✓ Voice mailbox

### 3.3 Phonebook

- ✓ Phonebook capacity: 200
- ✓ Content: Name, General, Mobile, Home, Office, Fax numbers, Email, Address, URL, Note, Ringer
- ✓ Groups: 5

### 3.4 Security and Settings

- ✓ UIM lock/unlock, Phone lock/unlock, Keypad lock/unlock,
- ✓ Language: Chinese, English, Others can provide as request

### 3.5 FM Radio (Optional)

### 3.6 Personalization

- ✓ Customizable profiles
- ✓ Themes

### 3.7 Organizer, Games, Applications and Language

- ✓ Games: Kong Ming chess, Memory game, Battle City, Bullet dodge, Tetris
- ✓ Organizer: World clock, Calendar, Alarm
- ✓ Applications: Calculator, Stopwatch, Scratchpad, Text reader

## 4 Sales package contents

- ✓ C5
- ✓ Battery
- ✓ Charger
- ✓ Headset
- ✓ Data Cable (Optional)
- ✓ User Manual
- ✓ Guarantee Card